FEASIBILITY STUDY

NC 211 Through I-95 Interchange
At Lumberton, Robeson County
U-2415

Prepared by
Planning and Research Branch
Division of Highways
N. C. Department of Transportation

R. G. Dawson, Jr., P. E.
Head of Feasibility & Special Studies Unit

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Date

J. M. Greenhill, P. E.
Manager, Planning and Research

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I. DESCRIPTION

This report covers a preliminary study of the proposed widening of a portion of NC 211 through the interchange area of I-95 at Lumberton. General location of the project is shown on Figure 1. This project is included in the 1988-1996 Transportation Improvement Program for feasibility study and/or right of way protection. No funds have been appropriated for this project.

II. NEED FOR PROJECT

Extreme congestion has prevailed for years along NC 211 through the I-95 interchange area. The highest current volume of 18,000 vehicles per day far exceeds the capacity of the existing two-lane section across the bridge over I-95. Congestion is further compounded by significant volumes of left turns at both signalized ramp terminals which have short left turn lanes.

Safety problems add to the need to improve this section of NC 211. Some 70 accidents have been reported throughout the interchange area during a recent 3 1/2-year period. Also, three of the four diamond ramps are intersected by I-95 frontage roads close to the ramp intersections with NC 211 (see Figure 2). Ramp-frontage road connections have been known to cause driver confusion, unsafe operation, and wrong-way movements. These frontage roads carry volumes ranging up to about 4000 vpd.

III. RECOMMENDATIONS AND COSTS

To correct capacity and safety deficiencies, the following improvements are recommended and shown on Figure 2:

(a) Widen NC 211 on the south side to at least five lanes with curb and gutter (64 feet face to face of curbs) through the interchange area. Due to the magnitude of future traffic projections (see Figure 3) and close spacing of signalized intersections, a sixth lane (12-foot width) may be necessary to provide additional capacity and/or storage for the heavy turning movements. Further detailed design and traffic engineering studies will more accurately determine the lane requirements for the complex interchange condition.

The recommended widening would begin at the end of the existing five-lane curbed section at Rowland Avenue and extend through the interchange area and the intersection with SR 1586 and then transition to the existing two-lane roadway some 0.2 mile beyond SR 1586. The existing bridge over I-95 should be replaced with a new and wider structure, which

would be constructed in stages by width to maintain traffic flow during construction. Retaining the bridge is not feasible because of its age (34 years) and condition. Also, the bridge would need to be lengthened to allow future widening of I-95 to six lanes.

(b) Remove the SR 1791, SR 1792, and SR 1590 connections to the ramps and relocate these roads to tie directly onto NC 211. The SR 1791 and SR 1590 connections are the most hazardous because they encourage wrong way entry into I-95. The SR 1792 connection with an on ramp is less hazardous, since it does not introduce the wrong way potential inherent with off ramps. However, relocation of SR 1792 should be made to eliminate the confusing configuration and traffic operation of the existing NC 211/on ramp/SR 1792 intersection.

Estimated costs of the recommended improvements are as follows:

NC 211

Roadway[1]		$ 800,000
Bridge		1,300,000
Right of Way		100,000
	Subtotal	$ 2,200,000

Frontage Road Relocations

Roadway		$ 400,000
Right of Way		670,000
	Subtotal	$ 1,070,000
	Total	$ 3,270,000

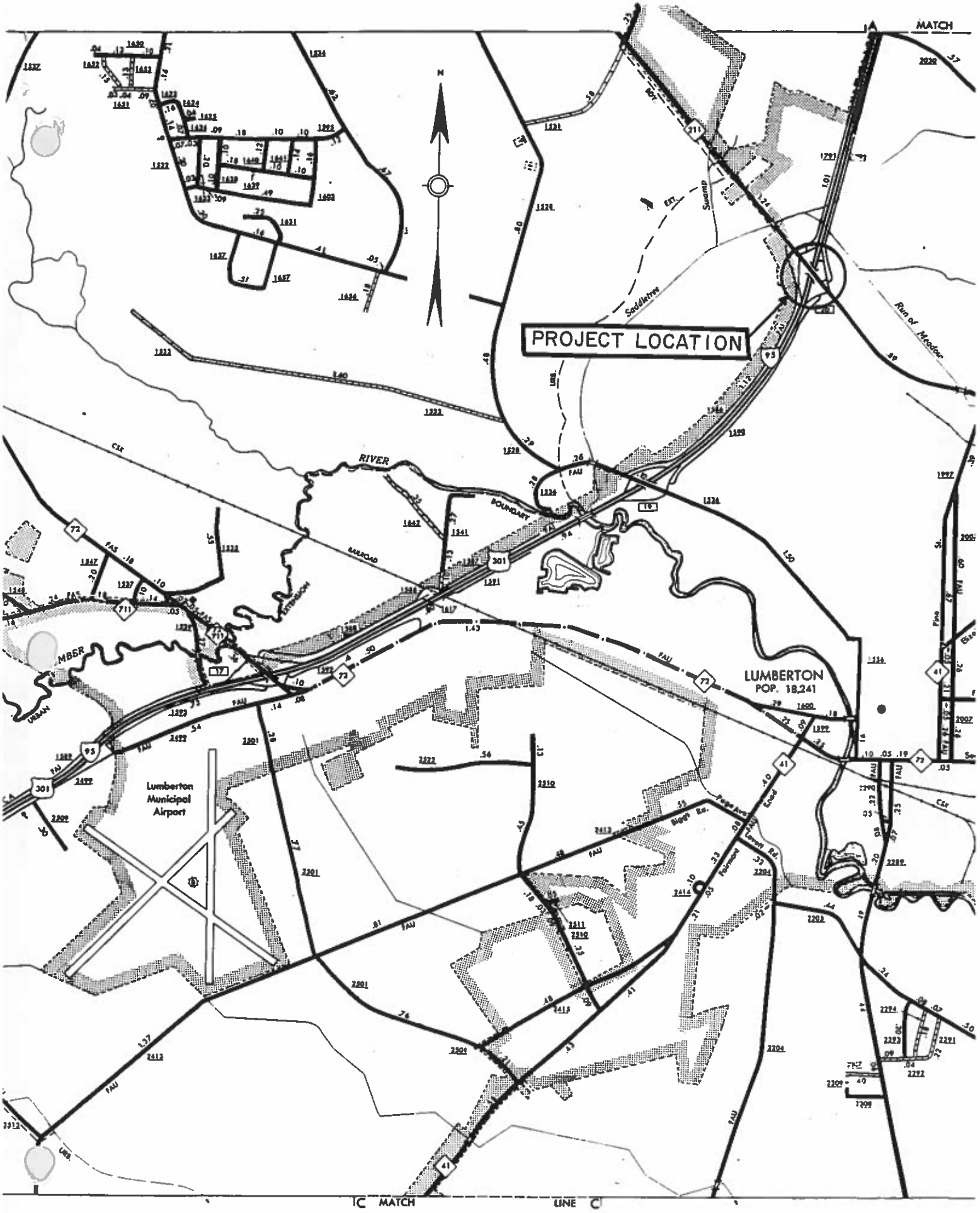
IV. OTHER COMMENTS

No other alternatives were considered for this project. The project involves improvement of an existing major thoroughfare across an Interstate route with necessary adjustments to the undesirable ramp-frontage road connections. However, if the project is to be funded in the future, all feasible alternatives and their associated impacts must be evaluated in a planning/environmental document and a final decision will be made on the appropriate improvements.

Major negative environmental impacts of the project would be: (a) loss of commercial property and displacement of one business required for right of way to relocate the frontage roads and (b) disruption to traffic flow during construction. Some additional right of way would be reqired for the widening of a short length of NC 211 beyond SR 1586. Acquisition of estimated 50 to 60-foot rights of way plus construction easements would be required for the recommended frontage road relocations.

[1]Includes minor ramp improvements

RGD/sdt



LUMBERTON AND VICINITY

FIGURE 1


N
NC 211
DAYS INN
DAIRY QUEEN
MOTEL 9
SR1589
SR1791
I-95
SR1590
SR1792
HOWARD JOHNSON
ROWLAND AVE.
RAMADA INN
SUNOCO
AMOCO
BONANZA (VACANT)
W SIZZLER
NC 211
LEGEND
NEW STRUCTURE
NEW OR RESURFACED ROAD
EXISTING ROAD REMOVAL
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND RESEARCH BRANCH
NC 211 THROUGH I - 95
INTERCHANGE, ROBESON COUNTY
U - 2415
1/89
0 ft 200
FIG. 2

IR-95
EST. 1990/2010 ADT IN HUNDREDS

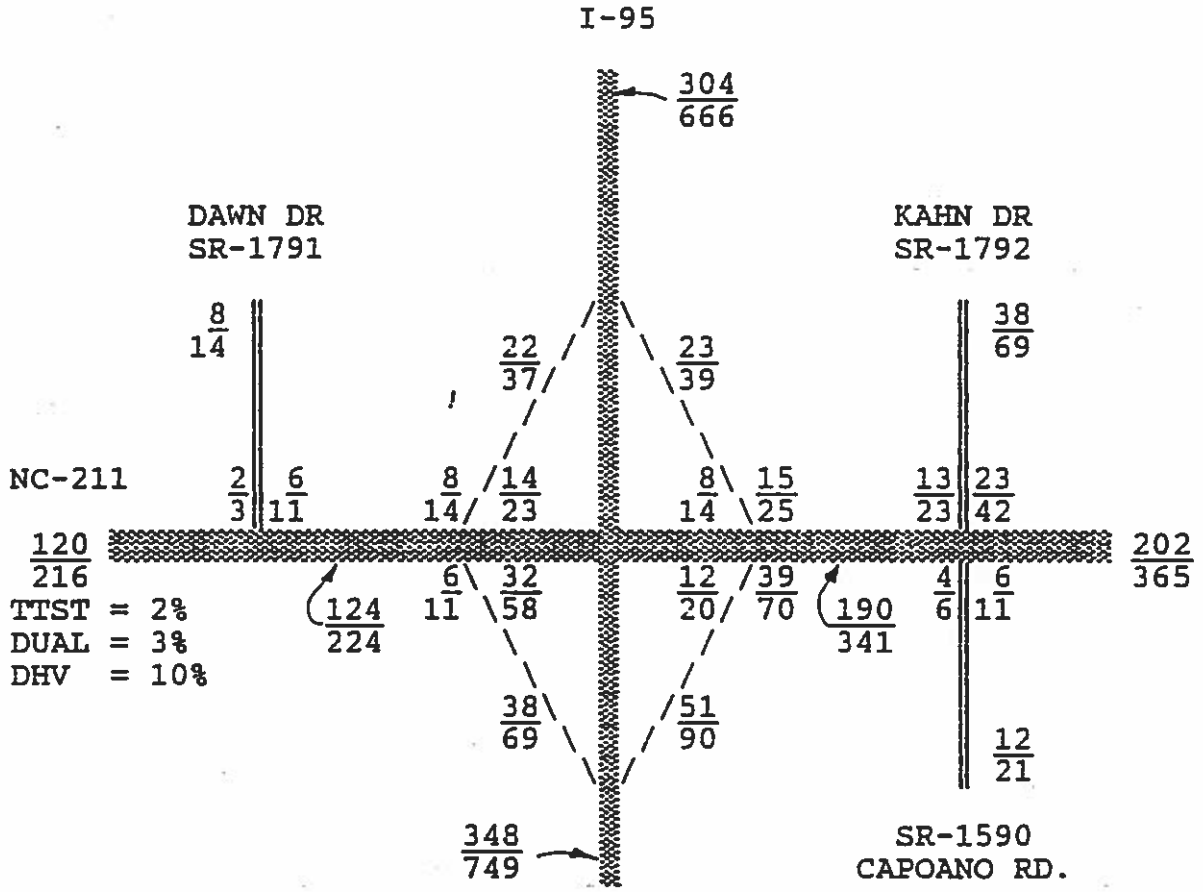


FIGURE 3